

# Lower Columbia River Sturgeon Annual Update and Policy Review

Washington Fish and Wildlife Commission Meeting

Olympia, Washington  
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Fish Program

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# Purpose

- Provide annual review of stock status and fisheries (included in Commission Policy C-3001 “Lower Columbia Sturgeon Management”)

# Background

- The Lower Columbia white sturgeon population inhabits the lower Columbia River and tributaries below Bonneville Dam and includes fish that migrate to marine areas, coastal bays, Puget Sound, and their tributaries
- Populations above Bonneville Dam, including the Snake River and the upper Columbia River are considered separate populations and are not included in this briefing

# Annual Review Topics

- Recommended management changes
- Other pertinent information
- Review in-season management actions
- Accounting of fish left unharvested
- Review of harvest outside lower Columbia River
- By-catch in all fisheries
- Predation rates
- Stock status

# Policy Guidance for 2014

## Policy C-3001 revised and extended 5 years

- March 1, 2014 through December 31, 2018

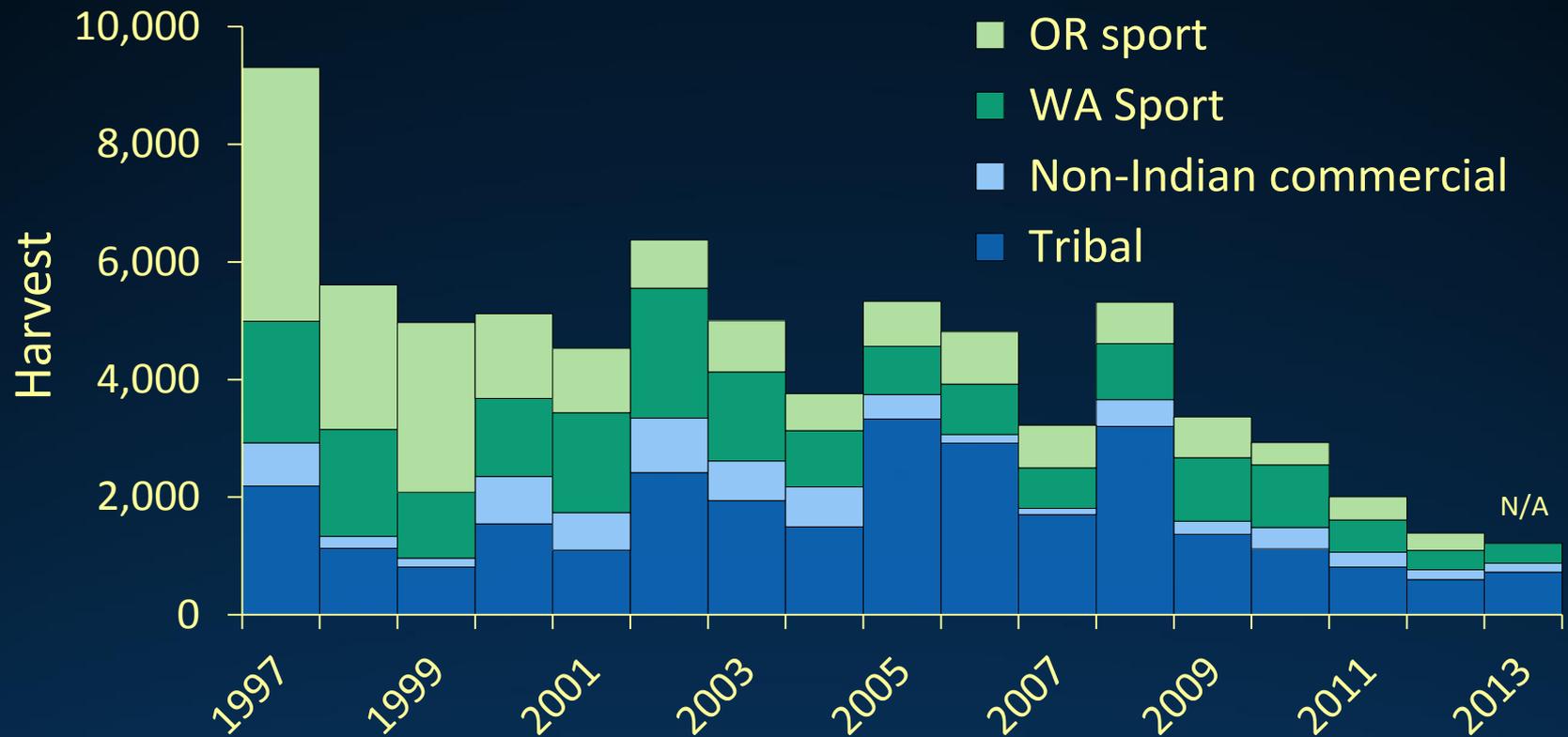
## Retention Prohibition

- Prohibit retention in the Columbia River below Bonneville Dam, the WA coast, Puget Sound, and their tributaries, effective Jan. 1, 2014.

# Other Information

- Oregon Fish and Wildlife Commission
  - Adopted retention prohibition for Columbia River and tributaries below Bonneville Dam and for Oregon coastal estuaries and river systems, effective Jan. 1, 2014
- Angler participation dropped in 2014, by 90% in the estuary fishery and by 82% in the rest of the river.

# Harvest Outside Columbia River



# Population Assessment Tools

- Abundance estimation
  - Two mark-and-recapture approaches:
    - 1) Historic approach samples harvest for tag recoveries
      - Results available 15 months after tagging
    - 2) Research setline survey to obtain recoveries
      - Results available within a few months of tagging
      - Includes most size-segments of the population
- Sport fishery CPUE
- Sub-yearling (Age-0) productivity indexing

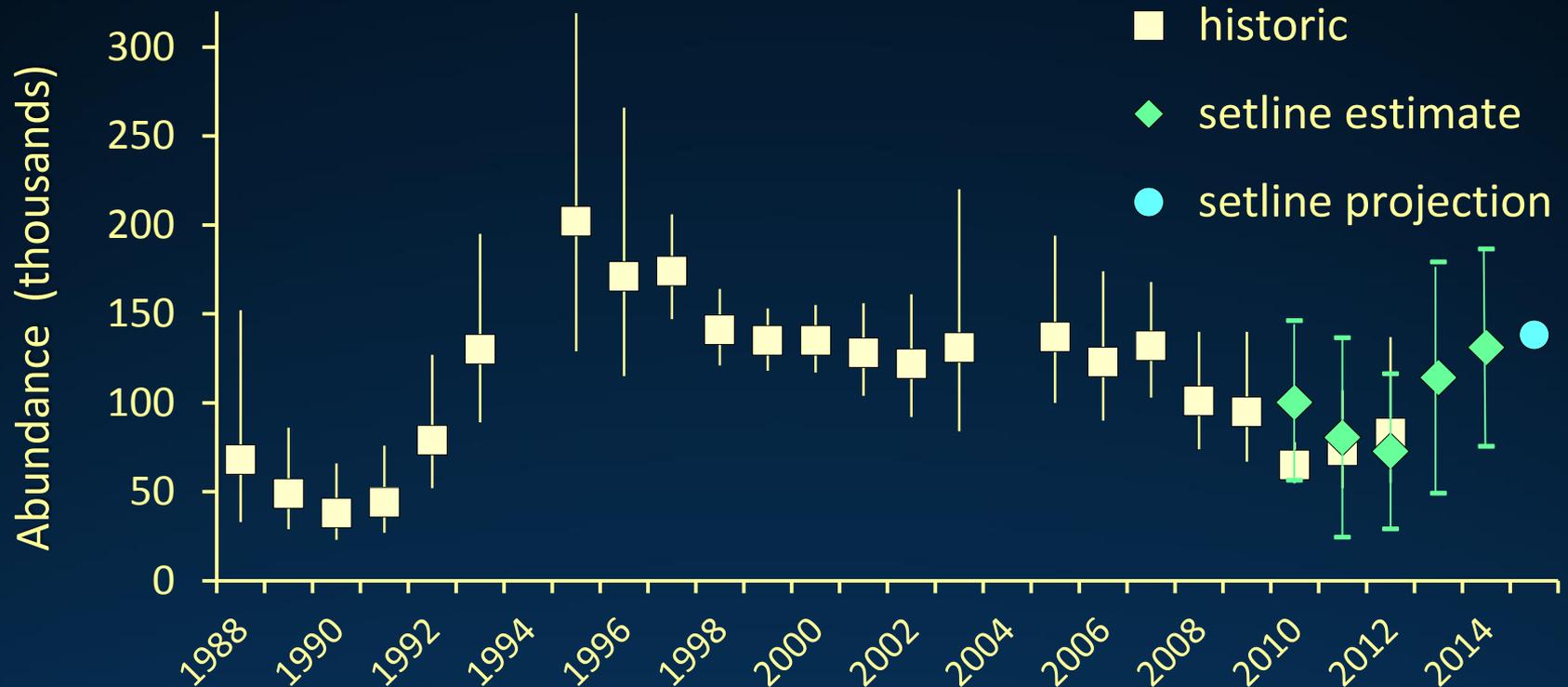
# Population Estimates

## Legal-Size Fish

Year	Historic method	Setline method		Harvest guideline
		Estimate	Projected	
2009	95,000	--	--	40,000
2010	65,300	100,200	--	24,000
2011	72,800	80,500	77,000	17,000
2012	83,400	72,700	65,000	10,400
2013	--	114,200	74,300	10,105
2014	--	130,990 <sup>1</sup>	131,700	0
2015	--	--	138,200 <sup>1</sup>	--

<sup>1</sup> Preliminary.

# Recent Trends in Abundance Legal-Size Fish



# Population Estimates Spawner-Size Fish

- Abundance of spawner-size fish (fish >165cm) is currently below the Oregon Plan conservation status threshold of 3,900 fish
- It appears that sufficient numbers of sub-adult fish (fish 137cm – 165cm) have already escaped the fishery to allow the spawner-size population to increase above the threshold within a couple years

# Sport Fishery Catch Trends

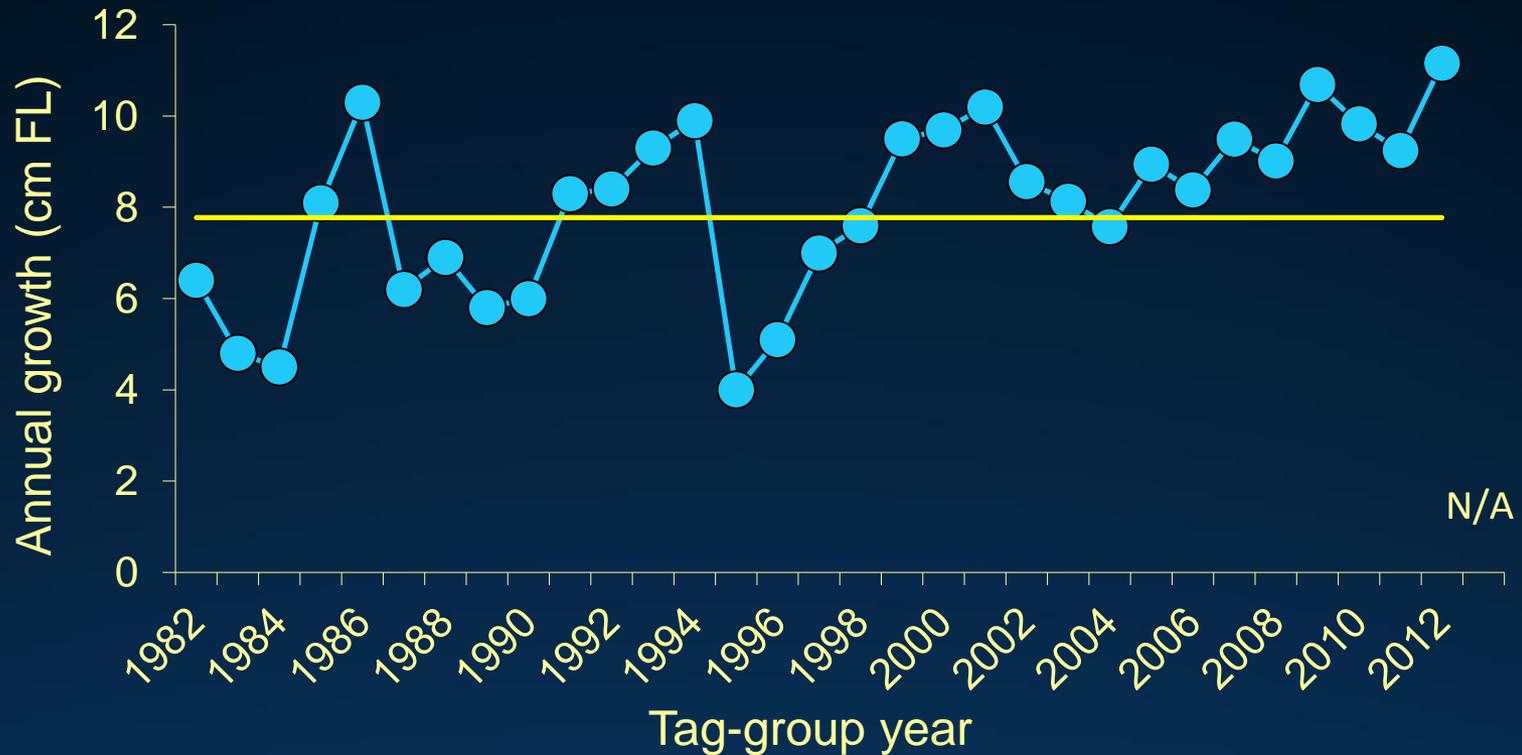


# Predation of White Sturgeon

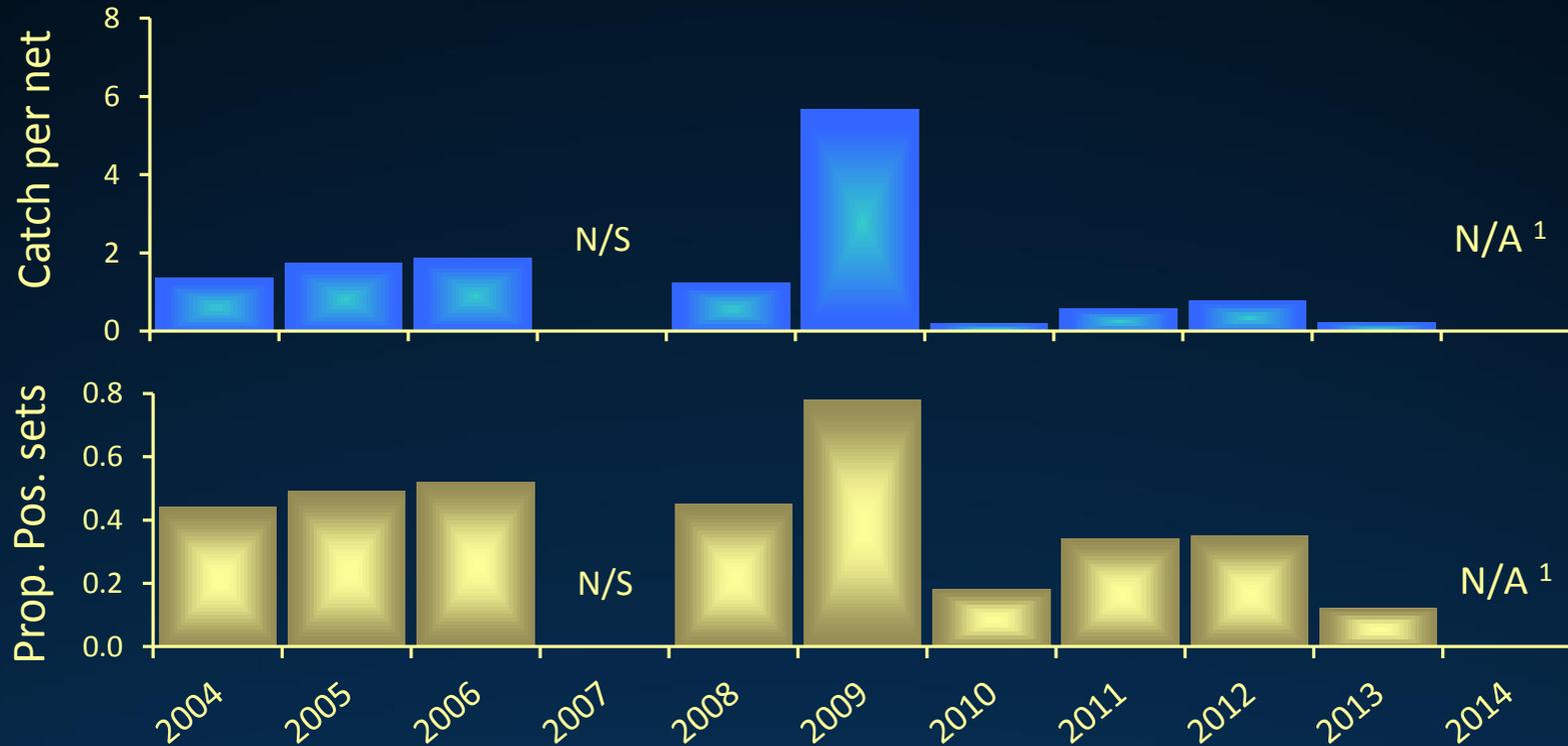
## USACE Bonneville Dam Observations



# Annual Fish Growth Rates

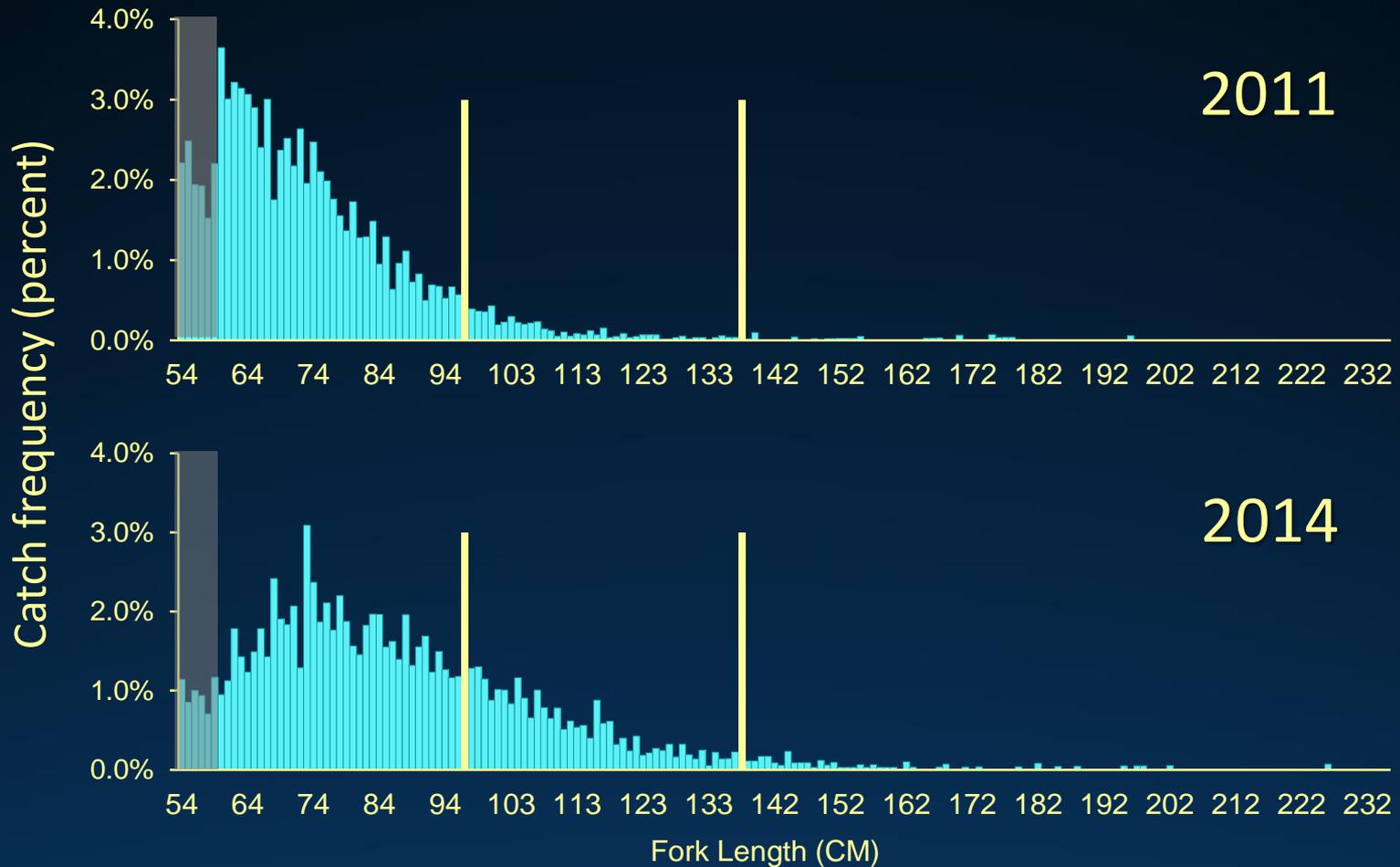


# Sub-Yearling Production Index



<sup>1</sup> Sampling for Age-0 sturgeon takes place from November to mid-December.

# Setline Catch-Frequency by Size



# Production and Recruitment

## Sub-yearling Index Survey

- Both indices show peak production in 2009 followed by the four lowest years, just with differing magnitudes
- Unknown how years surveyed compare to historic production

## Setline size frequency

- 2009 year-class may have shown up in 2011 setline catch
- Proportion of smallest juveniles has declined since 2011
- Likely in the middle of a period of decent recruitment to legal-size (2004-2009 sub-yearling production and maybe a bit before), to be followed by a decline in recruitment to legal-size

# Thank You



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